

Research report

# Weighing discomfort in college age American females: Incidence and causes

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## Abstract

We report that undergraduate females, unlike males, indicate a high degree of discomfort at the prospect of being weighed in the presence of male or female acquaintances. This discomfort is surprising, in that the other people present already have a good sense of the weight of the female by virtue of being able to see her. An analysis of this discomfort and sex-difference, in the form of response to variations of this situation, presented in mini-scenarios in a questionnaire, suggests that it is neither due to generally greater embarrassment sensitivity in the females, nor greater sensitivity in females to public display of personal information. Furthermore, the weighing discomfort is not about the process of being weighed, but rather the revealing of the weight. Part of the discomfort comes from the participants' sense that they are overweight, and part of it comes simply from calling attention to the fact that weight itself is an unflattering personal attribute, independent of the actual value of the weight.

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## Introduction

It is widely known that most American post-pubescent females feel overweight and are concerned about their weight status (e.g., Rodin, Silberstein, & Striegel-Moore, 1984; Rozin, Bauer, & Catanese, 2003). In this paper, we document and explore a previously unstudied manifestation or correlate of this reported concern: female reluctance or discomfort at being weighed in the presence of others. This discomfort is of particular interest because its cause is unclear. That is, once a female has been observed by others, an impression/estimate of her weight status has been formed. Under these conditions, the process of weighing and its result (the knowledge of the weight) should be redundant information, and hence not worthy of a negative reaction.

In a previous experimental study, normal weight participants (men and women) were weighed and sequentially allocated to the 'average weight', the 'underweight' or the 'overweight group' according to a fictional height/weight chart (Ogden &

Evans, 1996). The results indicated that participants who were told that they were overweight showed deterioration in mood and self-esteem but no change in body image. In another study, the repeated weighing of females resulted in increases in both anxiety and depression and lowered self-esteem (Ogden & Whyman, 1997). These studies suggest that weighing may not be the benign intervention it is often assumed to be.

At the beginning of the study being reported here, we document a large degree of discomfort in undergraduate females about being weighed in the presence of either male or female acquaintances, and show that this discomfort (averaging in the range of 50–60 on a 0–100 discomfort scale) is much larger than male discomfort at being weighed in the presence of others (averaging in the range of 20–30). We consider and empirically evaluate six hypotheses to account for both the absolutely high female discomfort, and the much higher discomfort in females as opposed to males.

1. Weighing or knowledge of weight by others is embarrassing, and females are generally more embarrassment sensitive than males.
2. Females are more sensitive (embarrassable) than males about knowledge by others of any personal information about themselves.

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3. It is not primarily the process of being weighed, but rather the public knowledge of weight that is the principal cause of discomfort.
4. In addition to 3, a second source of discomfort is simply calling attention to weight as a generally undesirable attribute of a female.
5. The more dissatisfied a female is with her weight/figure, the higher will be her weighing discomfort.
6. The revelation of weight in the face of an already present impression from public assessment of the body figure results, in part, from the fact that most women think they weigh more than other people think they do. That is, that their actual weight is higher than others' estimates of their weight and they are benefiting from the underestimation of their weight by others.

## Methods

A brief anonymous questionnaire on attitudes to weight and being weighed was administered to all students in two introductory psychology classes at the University of Pennsylvania, in December of 2004. Respondents were 292 females and 190 males. Principal racial groups were white (170 females, 114 males) and Asian or Asian/American (67 females, 40 males).

The questionnaire dealt with 'attitude to being weighed' in various social contexts, plus a set of variants on this designed to isolate causes of aversion to being weighed. These items will be described with the presentation of results, and are indicated in the first column of [Table 1](#). We used a composite measure of weight dissatisfaction, including: (1) the difference between current and ideal weight; (2) the difference between current and ideal figures (based on the commonly used set of nine figures of increasing fatness (Rozin & Fallon, 1988; Stunkard, Sorenson, & Schlusinger, 1980)). (3) Three measures of the frequency of concern about weight, answered on a scale: 1 = never, 2 = rarely, 3 = sometimes, 4 = often, and 5 = almost always. The three items were "I am dieting", "I consciously hold back

meal time to not gain weight" and "I am concerned about being overweight"  $z$ -scores were computed for the first two measures, and the mean of three frequency measures, and the mean of these three  $z$ -scores was used as a total measure of weight dissatisfaction. Cronbach's  $\alpha = .79$  for this composite score. We also collected self-reported weight and height, and computed the BMI.

## Results

Because we are carrying out multiple  $t$ -tests, we adopt a significance level of  $p < .01$  one-tailed.

### *General weight dissatisfaction in females and males*

Females scored significantly more dissatisfied ( $p < .001$  in all cases by independent  $t$ -test) on all five of the component measures, and the difference in the composite mean  $z$ -scores (females .32 [S.D. = 68] and males  $-.51$  [S.D. = 81] was highly significant ( $t[480] = 12.02$ ,  $p < .001$ ),  $d = 1.11$ ).

### *Discomfort at being weighed*

The critical measure for this study is discomfort at being weighed. It is the presumption of this study that there would be a substantial female aversion on this item, since most of the measures to be reported are designed to explain this effect. We asked three questions to assess this discomfort, as follows (see [Table 1](#), lines 1–3): "Indicate how uncomfortable you would feel in each of the situations described below (0 = NOT UNCOMFORTABLE AT ALL to 100 = EXTREMELY UNCOMFORTABLE).

- Getting on a scale to get your weight while alone.
- Getting on a scale to get your weight in front of some male acquaintances.
- Getting on a scale to get your weight in front of some female acquaintances.

Table 1  
Degree of discomfort experienced in a range of activities, including weighing

Item	Discomfort score <sup>a</sup>	
	Females mean (S.D.)	Males mean (S.D.)
1. Getting on a scale to get your weight while alone	19.4 (30.0)	12.5 (29.9) n.s.
2. Getting on a scale to get your weight in front of female acquaintances	53.7 (33.1)	26.5 (29.9)***
3. Getting on a scale to get your weight in front of male acquaintances	59.8 (35.0)	21.1 (31.0)***
4. Dropping a notebook with loose pages on the sidewalk in front of a few strangers	40.4 (26.7)	36.2 (27.1) n.s.
5. Getting your height measured in front of some female acquaintances	12.6 (28.0)	18.3 (30.9) n.s.
6. Announcing how many hours you sleep in a typical night in front of some female acquaintances	10.4 (27.0)	12.4 (29.0) n.s.
7. Wearing a button that displays your accurate weight while hanging around with some female acquaintances	59.8 (32.7)	33.0 (31.1)***
8. Wearing a button that displays your accurate height while hanging around with some female acquaintances	20.8 (32.6)	22.7 (30.8) n.s.
9. Wearing a button that simply says "weight" (no numerical value is on the button) while hanging around with some female acquaintances	29.8 (30.8)	23.9 (30.9) n.s.
10. Wearing a button that just simply says "height" (no numerical value is on the button) while hanging around with some female acquaintances	18.2 (28.9)	21.6 (29.9) n.s.

n.s.: non-significant, \*\*\* $p < .001$ ; the asterisks represent the difference between the male and female scores.  $N = 293$  females and 198 males.

<sup>a</sup> Discomfort score rated on a 0–100 scale, where 0 = not uncomfortable at all and 100 = extremely uncomfortable.

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